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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/036,240

01/03/2002

Behrouz Amini

3330

7590

07/09/2004

Dr. Behrouz Amini
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EXAMINER

HASHMI, ZIA R

ART UNIT

PAPER NUMBER

2881

DATE MAILED: 07/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/036,240	Applicant(s) AMINI, BEHROUZ	
	Examiner Zia R. Hashmi	Art Unit 2881	<i>AW</i>

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 January 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-15 are rejected under U.S.C. 103(a) as being unpatentable over Welch et al. (6,011,825), in view of Fujimoto et al. (US 2002/0106046 A1).
3. With respect to independent claims 1, 9 and 13 and dependent claim 6, Welch et al. disclose a target system for confining a material sample to be irradiated with a beam of charged particles for producing radioisotope, the system comprising: a body having a substantially enclosed chamber for confining a material sample to be irradiated with a beam of charged particles (Abstract, lines 1-9, col. 2, lines 46-47, col. 3, lines 12-19, col. 4, lines 14-36, col. 31, claims 5 & 6, col. 32, claim 12, and 40 & 44 in Fig. 3A & 3B), wherein the enclosed chamber has an entrance end through which charged particles are permitted to enter the chamber (32 in Fig. 3A & 3B), is elongated in shape as a path is traced there along from the entrance end, has a longitudinal axis (col. 3, lines 58-62, col. 4, lines 14-36, col. 5, lines 3-4, col. 8, lines 35-38, and Fig. 3A-C), and provides means for directing a cooling fluid through fluid-conducting passageway for purposes of cooling the body (col. 4, lines 1-8, lines 28-32, col. 7, lines 17-22, col. 9, lines 2-8, col. 11, lines 51-52, col. 12, lines 16-21, and 60 in Fig. 3A & 3B).

4. With respect to claims 1-5 and 7-15, Welch et al. fail to disclose means of heating the body and controlling its temperature. Fujimoto et al., however, disclose means mounted within the body for heating, when desired, the material sample to an elevated temperature, and means associated with the body for setting and controlling temperature of the body (para 0030, lines 1-19, para 0049, lines 6-11, and 24, 28, 20, and 24 in Fig. 2).

It would have been obvious to one having ordinary skill at the time of the invention was made to combine methods and apparatus of Welch and Fujimoto et al., and add features like providing a thin film exit for charged particles (a well known technology in this art), or placing a coil along the axis of the chamber for creating a magnetic field, because Welch et al. teach (col. 1, lines 32-35) that the on-site production of radionuclides at medical research and/or treatment centers facilitate their immediate use in diagnostic and therapeutic applications.

Conclusion

5. Wieland et al. disclose (US 2004/0013219 A1) apparatus and methods for producing radionuclide such as Fluorine-18, by circulating a target fluid through a beam strike target.


6. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you

have questions on access to the Private PAIR system, contact Electronic Business Center (EBC) at 866-217-9197 (toll-free).

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Zia Hashmi whose telephone number is (571) 272-2473. The examiner can normally be reached between 8.30 AM- 5 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John R. Lee can be reached on (571) 272-2477.

Zia Hashmi

June 14, 2004


JOHN R. LEE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800